PTO/SB/08A (08-03)

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Sheet 1

## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Complete if Known				
Application Number	10/750,293			
Filing Date	December 31, 2003			
First Named Inventor	Sangeeta N. BHATIA			
Art Unit	unknown	_		
Examiner Name	unknown			
Attorney Docket Number	BUCSD 1025064			

Examiner	Cito	Document Number	Publication Date	DOCUMENTS  Name of Patentee or	December 11 Mars
Initials*	Cite No.1	Number-Kind Code <sup>2 (F Incom)</sup>	MM-DD-YYYY	Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevan Figures Appear
GRK	1_	<sup>US-</sup> 6,423,252	2/1995	IKSOO, Chun et al	all document
GRK	2	<sup>US-</sup> 6,103,255	11/1994	LEVENE, Howard	all document
GRK	3.	<sup>US-</sup> 6,039,897	2/1997	LOCKHEAD, Michael J.	all document
GAK	4	<sup>US-</sup> 6,143,293	6/1988	WEISS, Lee	all document
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FOREIGN PATENT DOCUMENTS								
Examiner Initials*	Cite No.1	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages	Γ		
		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>8</sup> (if known)	MM-DD-YYYY	- Applicant of Ones Bocamen	Or Relevant Figures Appear	7		
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Examiner Signature	KUHNS	Date Considered	7-19-07
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				Examiner Name	unknown	
Sheet	2	of	3	Attorney Docket Number	BUCSD 1025965	

		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials* Cite No. Include name of the author (in CAPITAL LETTERS), title of the article (when a the item (book, magazine, journal, serial, symposium, catalog, etc.), date, pag number(s), publisher, city and/or country where published.		Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue	T <sup>2</sup>
GRK	5.	Bhatia SN, and Chen C (1999) Tissue Engineering at the Micro-Scale, Biomedical Microdevices 2:131-144.	
GRK	6	Bhatia, S.N., Balis U,Yarmush ML, and Toner M, Effect of Cell-Cell interactions in preservation of cellular phenotype: Co-Cultivation of Hepatocytes and Non-Parenchimal Cells, FASEB J, (1999), 13(14): p. 1883-1990.	
GRK	7	Borenstein J.T., Terai H, King K.R., Weinberg E.J., Kaazempur-Mofrad M.R., and Vacanti J.P. Microfabrication Technology for Vascularized Tissue Engineering. Biomedical Microdevices, 2002 (4:3) p167-175.	
GRĮL	Chu TM, Orton DG, Hollister SJ, Feinberg SE, and Halloran JW. (2002) Mechanical and in vivo performance of hydroxyapatite implants with controlled architectures.Biomaterials, 23:1283-1293.		
ary	Hermanson, G.T. (1996) Bioconjugate Techniques. Academic Press.  Kapur R, Spargo BJ, Chen MS, Calvert JM, Rudolph AS (1996) Fabrication and selective surface modification 3-dimensionally textured biomedical polymers from etched silicon substrates, J Biomed Mater Res. 33:205-16.		
GRK	10	Mikos A.G., Sarakinos G., Leite S.M., Vacanti J.P., Langer R. (1993) Laminated three-dimensional biodegradable foams for use in tissue engineering, Biomaterials 14:323-330	
GRK	11	Mrksich, M., et al., (1997) Using microcontact printing to pattern the attachment of mammalian cells to self-assembled monolayers of alkanethiolates on transparent films of gold and silver. Experimental Cell Research 235:305-13.	
GRK/	Park A, Wu B, Griffith LG (1998) Integration of surface modification and 3D fabrication techniques to prepare patterned poly(L-lactide) substrates allowing regionally selective cell adhesion, J Biomater Sci Polym Ed. 9:89-110.		
GRK/	13	Shastri VP, Martin I, Langer R. (2000), Macroporous polymer foams by hydrocarbon templating. Proc Natl Acad Sci USA. 97:1970-5.	
92K	14	Zein I, Hutmacher DW, Tan KC, Teoh SH. (2000) Fused deposition modeling of novel scaffolds architectures for tissue engineering applications. Biomaterials 23:1169-1185	

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		_		Application Number	10/750,293		
INF	ORMATIO	N DIS	SCLOSURE	Filing Date	December 31, 2003		
STATEMENT BY APPLICANT		First Named Inventor	Sangeeta N. BHATIA				
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(Use as many sheets as necessary)				Examiner Name	unknown		
Sheet	3	of	3	Attorney Docket Number	BUCSD 1025965		

		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
GRK	15	Zhao B., Moore J.S.,. Beebe D.J. (2001) Surface-directed liquid flow inside microchannels. Science 291: 1023	

Examiner Signature	KUHNS	Date Considered	7-19-07
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<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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	closure Statement pplicant	Applicant Bhatia et al.		
1		Filing Date December 31, 2003	Group Art Unit	

		U.S. Patent Documents										
	Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate				
	SIP FRIK	AA	5,443,950	8/22/95	Naughton et al.	1	-					
	GRKY	AB	5,486,546	1/23/96	Mathiesen et al.	1	_					
9	P 298	AC	5,514,378	5/7/96	Mikos et al.	_	-					
	GRK .	AD	5,776,748	7/7/98	Singhvi et al.	-	-					
<b>?</b>	RADENARY C	AE	6,160,084	12/12/00	Langer et al.	-						
	GRK	AF	6,203,573	3/20/01	Walter et al.	-	-					
	GRK	AG	6,337,198	1/8/02	Levene et al.	_						
	aric	AH	6,379,962	4/30/02	Holy et al.	-	-					

Foreign Patent Documents or Published Foreign Patent Applications								
Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation	
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Other Documents (include Author, Title, Date, and Place of Publication)						
Examiner	Desig.					
Initial	ID	Document				
GRK	AN	Bhatia et al., "Micropatterning Cells in Tissue Engineering" Methods in Molecular Medicine, Vol. 18, pp. 349-363				
GRK	AO	Bhatia et al., "Controlling Cell interactions by Micropatterning in Co-Cultures: Hepatocytes and 3T3 Fibroblasts" Journal fo Biomedical Materials Research, Vol. 34, 189-1999 (1997)				
	AP					
	AQ					

Examiner Signature KUHN 5	Date Considered 7 - 19 - 07
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